

注 意 事 項

- 1 試験開始の合図があるまで、この問題冊子の中を見てはいけません。
- 2 試験中に問題冊子の印刷不鮮明、ページの落丁・乱丁および解答用紙の汚れ等に気付いた場合は、手を挙げて監督者に知らせなさい。
- 3 解答は、すべて解答用紙の所定の欄に記入しなさい。
- 4 問題冊子の余白は、下書き等に利用して構いません。
- 5 試験終了後、解答用紙のみを回収します。





[ 1 ] 次の文章を読み、問いに答えよ。

One day not long ago, Augie, a 4-year-old child, heard his grandfather regretfully say, “I wish I could be a kid again.” After a thoughtful pause, Augie came up with a suggestion: Grandpa should try not eating any vegetables. The logic was creative: Eating vegetables turns children into big strong adults, so not eating vegetables should reverse the process.

No grown-up would ever come up with that idea. But anyone with a 4-year-old can tell similar stories. Young children’s creativity seems to <sup>(A)</sup> outstrip that of even the most imaginative adults.

How does the ability to come up with unusual ideas change as we grow older? Does it begin to <sup>(B)</sup> flag in <sup>1</sup>adolescence? Before then? To investigate these questions, we and our colleagues recently conducted several experiments.

We began with a group of participants of various ages: 4- and 5-year-old preschoolers; 6- to 11-year-old school children; 12- to 14-year-olds; and adults. We presented them with a <sup>2</sup>scenario involving a machine that lit up when you put some combinations of blocks on it, but not others. Either of <sup>(1)</sup> two hypotheses could explain how the machine worked. It could work in a usual and obvious way: Some individual blocks would make it light up, and the other blocks have nothing to do with it. Or it could work in a more unusual way: It would take a combination of different blocks to make the machine light up.

We presented the participants with another scenario as well, also with two possible explanations. This scenario was social: We told a story about Sally, who approached a skateboard, and Josie, who avoided a <sup>3</sup>scooter. How come? The usual explanation was that something about Sally’s and Josie’s individual personality traits made them act as they did — maybe Sally was braver than Josie. A more unusual, though equally reasonable, explanation was that something about the situation was important — maybe the skateboard was safer than the scooter.

Presented with these two scenarios, most adults did indeed explain the events by talking about a single block, or about Sally’s traits — they gave the obvious explanation.

Then we added a <sup>4</sup>twist. Another group of participants saw the same scenarios, but this time they saw an additional set of facts that made the unusual explanation more likely than the more obvious one. <sup>(2)</sup> Would the participants go with the obvious explanation, or try something new?

When it came to explaining the machine, the pattern was obvious. The preschoolers were most likely to come up with the creative, unusual explanation. The school-age children were somewhat less creative. And there was a dramatic drop at adolescence. Both the 12- to 14-year-olds and the adults were the most likely to stick with the obvious explanation even when it didn’t fit the data.

But there was a different pattern when it came to the social problems. Once again the preschoolers were more likely to give the creative explanation than were the 6-year-olds or adults. Now, however, the 12- to 14-year-olds were the most creative group of all. They were more likely to choose the unusual explanation than were either the 6-year-olds or the adults.

Why does creativity generally tend to decline as we age? One reason may be that as we grow older, we know more. That’s mostly an advantage, of course. But it also may lead us to <sup>(3)</sup> we already / contradicts / ignore / think / evidence / that / what. We become too set in our ways to change.

Relatedly, the explanation may have to do with a <sup>(4)</sup> tension between two kinds of thinking: what computer scientists call exploration and exploitation. When we face a new problem, we adults usually exploit the knowledge about the world we have acquired so far. We try to quickly find a pretty good solution that is close to the solutions we already have. On the other hand, exploration — trying something new — may lead us to a more unusual idea, a less obvious solution, a new piece of knowledge. But it may also mean that we waste time considering crazy possibilities that will never work, something both preschoolers and <sup>5</sup>adolescents have been known to do.

This idea suggests a solution to the <sup>6</sup>evolutionary paradox that is human childhood and adolescence. We humans have an exceptionally long childhood and extended adolescence. Why make human children so helpless for so long, and make human adults invest so much time and effort into caring for them?

Childhood and adolescence may, at least in part, be designed to resolve the tension between exploration and exploitation. Those periods of our life give us time to explore before we have to face the <sup>7</sup>stern and earnest realities of grown-up life. Adolescents may no longer care all that much about how the physical world works. But they care a lot about exploring all the ways that the social world can be organized. And that may help each new generation change the world.

(*New York Times*, 2017, “What Happens to Creativity as We Age?,” modified)

注

<sup>1</sup>adolescence: 思春期(通例 12 歳から 18 歳くらい)

<sup>2</sup>scenario: 場面設定

<sup>3</sup>scooter: キックスケーター(子供用遊具)

<sup>4</sup>twist: ひねり, ひと工夫

<sup>5</sup>adolescent: 思春期の人

<sup>6</sup>evolutionary: 進化の上での

<sup>7</sup>stern: 厳しい

問 1 下線部(1)の 2 つの “hypotheses” の内容をそれぞれ日本語で述べよ。

問 2 下線部(2)の問いに対する答えを, 2 つの場面設定における実験結果を比較しながら, 100 字以内(句読点を含める)の日本語で述べよ。

問 3 下線部(3)を並べ替えて適切な英文を完成せよ。

問 4 下線部(4)について, 幼児・学童期と思春期(childhood and adolescence)と 2 つの思考方法(two kinds of thinking)はどのような関わりを持っていると筆者は推測しているか, 120 字以内(句読点を含める)の日本語で説明せよ。

問 5 下線部(A)と(B)に最も近い意味の語をそれぞれア~エのうちから 1 つずつ選び, 記号で答えよ。

(A) {  
ア compete  
イ compromise  
ウ defend  
エ exceed

(B) {  
ア decline  
イ develop  
ウ endure  
エ indicate

[ 2 ] 次の文章を読み、問いに答えよ。

Have you tried turning the sound down when watching a film or drama on TV? What becomes apparent when you do so is that music creates atmosphere without which many scenes become meaningless.<sup>(1)</sup> Probably the most famous example of the role of music in film is the shower scene in <sup>1</sup>*Psycho*, which is disturbing without the music but so much more terrifying with it. Music ( A ) our enjoyment of a film or TV program in many ways. Most movie music is designed to influence our emotions <sup>2</sup>subconsciously. If the action is ambiguous, the music can give us ( B ) as to what is going on. When there is no other information, music can help to define characters. Sometimes a character is given a theme. The meaning of such themes may vary depending on cultural ( C ), for instance, music that indicates bravery in one culture may indicate evil in another. Music is frequently more effective than dialogue in providing information to the audience, for instance, indicating the historical or future time period when the action is taking place. It can indicate urgency, building up tension when something frightening is going to happen, while increasing volume creates the impression of fast-moving sequences. Where music accompanies actions, we remember the mood of the event better as the music ( D ) our emotional experience.

How aware are you of the music in the environment when you are shopping, eating out or on the phone? Does music in these contexts irritate you or do you think it enhances your experience? Our shopping, eating and drinking habits can be manipulated through music. Did you know, for instance, that the speed at which we shop is positively related to the tempo and volume of any background music which is playing?<sup>(2)</sup> When the music is slow, we spend longer shopping and consequently tend to spend more money. The type of music playing can influence what we buy. In one study, stereotypical French or German music was played in a supermarket. This influenced whether French or German wine was bought, although customers were unaware of the influence of the music. Similarly, music representing nature influenced the perceptions of the country of origin of orange juice, its cost, whether the oranges were genetically modified and beliefs about the health benefits of drinking it. Music is used to encourage us to enter and <sup>3</sup>browse in shops. It is selected to appeal to those likely to buy the range of products on offer. The effects of music used in this way depend on the match between the music and customer preferences, the familiarity of the music, the extent to which it is liked and the customer's mood. Decisions about when to use music in <sup>4</sup>retail environments are based on commercial value (sales, number of items purchased, rate of spending), emotion (mood, excitement, pleasure) and <sup>5</sup>duration (length of experience, time taken to serve customers, duration of music listening, time taken to make spending decisions). Overall, the evidence<sup>(3)</sup> across a range of studies has shown that there are moderate effects of music on these.

One of the ways that music is used commercially is to impact on our levels of excitement. For instance, restaurants<sup>(4)</sup> can use music to change the speed at which we eat or drink. When slow music is playing, our speed of eating slows and we spend more money on drinks. Fast music increases speed of consumption. This can encourage faster <sup>6</sup>turnaround in busy periods. The type of music played when we are put on hold on the telephone can influence whether we hold or not. We are more likely to wait if we like the music. As musical preferences vary widely across the population, businesses have difficult decisions to make about what kind of music they might play and whether it might drive some customers away. Some may decide that on balance it is better not to have any music playing.

In advertising, music plays a key role in encouraging us to buy particular products.<sup>(5)</sup> It is perceived to enhance the attitudes of potential customers if it fits with or conforms to their conception of the nature of the product. For instance, exciting classical music is often used to advertise expensive sports cars. Food advertisements tend to be accompanied by cheerful songs, which may include the product name in their <sup>7</sup>lyrics. When music is well matched with the product, it is better remembered. Overall, music is effective in enhancing the appeal of products and promoting memory for them.

(Susan Hallam, *The Psychology of Music*, modified)

注

<sup>1</sup>*Psycho*: 『サイコ』(アルフレッド・ヒッチコック監督の異常心理を扱ったサスペンス映画)

<sup>2</sup>subconsciously: 潜在意識下で、気がつかないうちに

<sup>3</sup>browse: 商品を見て回る

<sup>4</sup>retail: 小売(業)の

<sup>5</sup>duration: (継続)期間, 時間

<sup>6</sup>turnaround: 客の入れ替わり, 客が入店し退店するまでの過程またはその時間

<sup>7</sup>lyrics: 歌詞

問 1 下線部(1)を日本語に訳せ。“do so”が表す内容も明示すること。

問 2 下線部(2)の内容を日本語で具体的に説明せよ。

問 3 下線部(3)にある“moderate effects”となる具体的な原因を日本語で説明せよ。

問 4 下線部(4)について、(a)レストランの最終的な目的は何かを日本語で述べよ。また、(b)それをどのように実現しているかを120字以内(句読点を含める)の日本語で説明せよ。

問 5 下線部(5)にある“a key role”は具体的に何かを日本語で述べよ。

問 6 (A)～(D)の部分に入る最も適切な語句をそれぞれア～エのうちから1つずつ選び、記号で答えよ。

(A) {  
ア concentrates on  
イ conforms to  
ウ consists of  
エ contributes to

(B) {  
ア ideas  
イ reasons  
ウ perspectives  
エ clues

(C) {  
ア advantages  
イ differences  
ウ conflicts  
エ exchanges

(D) {  
ア deepens  
イ represents  
ウ requires  
エ shares

[ 3 ] Read the following newspaper article and answer the questions (Questions 1-4) *in English*.

It has been 20 years since the government legalized organ transplants from brain-dead donors, and seven years since the law was revised to allow children to donate organs and families to approve organ donations of loved ones unilaterally.<sup>(1)</sup>

But while the transplant rate in Japan has increased approximately six times since 2010, it is still relatively low. Only 64 are said to have taken ( A ) in 2016 for all organs. The Japan Organ Transplant Network (JOTN) says that as of April there were 593 patients waiting for hearts, 321 for livers and 11,965 for kidneys.

In the United States, the organ donation rate is 26 transplants per million; in South Korea it is 8.4. In Japan, it's only 0.7. The anniversary of the transplant law has prompted various media to think about their role in spreading awareness of organ donation. While there are still cultural barriers that prevent understanding, there are other, structural difficulties that have to be overcome in order to make transplants an integral part of medical treatment in Japan.

Japan has the strictest organ donation law in the world. Before 1997, donations could only be made to other family members and from people whose hearts had stopped, which greatly limits the kind of organs that can be transplanted. The 1997 law made it possible for individuals to indicate their willingness to donate organs if declared brain dead, but there was no essential increase in the number of possible donors, because the same people who agreed in surveys to donate organs to family members now signed up to donate to anyone.

Following a revision in 2010, which widened the range of possible donors to children under the age of 15 and individuals whose families consented to donating their organs even if they themselves hadn't indicated such in advance, the number of actual brain-dead donors increased, but the number of heart-dead donors decreased. JOTN estimated that most of the people who prior to the revision were willing to donate organs if their heart stopped were now instead agreeing to donate organs if they were declared brain dead. In effect, there was no significant increase in new donors.

Likewise, in a government survey quoted by the broadcaster NHK, half the respondents said they would not consent to a relative's organ donation if that relative was declared brain dead. In cases where individuals themselves agreed to donate organs if they were declared brain dead, 87 percent of their relatives said they would give consent (family consent is still necessary for removing organs from brain-dead donors).

Many believe the main obstacle to donation is an uneasiness with the idea of <sup>1</sup>cannibalizing one's own body or the body of a loved one, so the media, they believe, should provide clearer examples of organ donations.

Somehow, however, attitudes are changing. NHK found that young people are much more likely to fill out donor cards, so there should be a higher number of available organs in the future. But the system as it stands may not be able to take full advantage of a greater willingness to donate. The health ministry has designated 896 hospitals as being qualified to participate in the organ donation program, but of these only 435 say they are ready. Over the past 20 years, 60 percent of donations took ( B ) at 62 hospitals.

Another issue is that brain death is often determined in emergency rooms (ER), which are hectic under normal circumstances.<sup>(2)</sup> ER doctors are not sufficiently prepared to deal with donors in such situations. Time is critical, especially in the case of organs that are only <sup>2</sup>viable from living — meaning brain-dead — donors. What is needed is full-time professional support staff who can process donations. The work of such transplant coordinators, however, requires extensive training and experience.

The best way to stimulate organ donations is to show how successful transplants have become in Japan, and some media have highlighted the work of Dr. Takahiro Oto of Okayama University Hospital, considered one of the world's most skilled lung transplant surgeons. Three years ago, Oto's patients had a five-year survival rate of more than 80 percent, whereas the average five-year survival rate worldwide for lung transplants is around 50 percent. Oto could perform many more transplants than he does now, but he doesn't have the time because he must also <sup>3</sup>screen <sup>4</sup>recipients and donors, as well as provide aftercare to transplant patients. In other countries, transplant surgeons only operate. Other necessary tasks are handled by different medical professionals.

Japan's medical world needs to work on these structural obstacles, and then the problem of convincing people to donate may actually take care of itself. It depends on the circumstances. A recent article in the Asahi Shimbun told the story of a woman whose husband became brain dead after a series of strokes. Although overcome with sadness, she saw a poster in the hospital about organ donation and asked the doctor if she could donate her husband's organs. The doctor said, of course she could. He just hadn't thought to ask her if she was willing to, perhaps because he had taken it for granted that she would not be willing.

(*Japan Times*, 2017, "Organ Donations and Transplants Still Face Obstacles in Japan," modified)



Notes:

<sup>1</sup>cannibalize: take the parts of a machine, vehicle, etc. and use them to repair or build another

<sup>2</sup>viable: capable of surviving or living successfully

<sup>3</sup>screen: examine people or things in order to decide whether they are suitable for a particular purpose

<sup>4</sup>recipient: someone who receives something

Question 1: Choose from the phrases (a)–(d) the one that has the nearest meaning to the underlined words (1) and (2) in the context of the passage.

- |       |  |       |                           |
|-------|--|-------|---------------------------|
| (1) { | (a) without indication left by the dead person | (2) { | (a) extremely unavailable |
|       | (b) despite the advice of family and friends   |       | (b) extremely busy        |
|       | (c) against the instinct of the dead person    |       | (c) extremely sad         |
|       | (d) after consulting a qualified lawyer        |       | (d) extremely dangerous   |

Question 2: In the spaces ( A ) and ( B ), write **one** word (*the same word*) that completes the meaning in both cases.

Question 3: From the following sentences (a)–(e), choose the **two** that do **not** accurately reflect the content of the passage.

- (a) Persuading more people to donate their organs is the most essential step towards providing improved infrastructure for organ transplants.
- (b) Fewer than half of the hospitals potentially capable of transplants are actually prepared to carry them out.
- (c) Even when a potential donor has not indicated a willingness to donate organs before death, his or her organs can still in some cases be used for transplant.
- (d) Removing the structural obstacles that make organ transplants difficult in Japan will improve the skills of Japanese surgeons, who need to catch up with surgeons in other advanced nations.
- (e) Increasing awareness of the success of organ transplants in Japan is likely to make people more willing to consent to organ donation.

Question 4: Attitudes to organ donation seem to be changing in Japan, especially among the young. In about 100 words, describe your own attitude to organ donation, including your ideas about transplanting organs from a loved one.













